

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Division - Watershed Management Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: EXETER RESERVOIR	Lake Area (ha): 7.12
Town: EXETER	Maximum depth (m): 4.6
County: Rockingham	Mean depth (m): 2.1
River Basin: Coastal	Volume (m <sup>3</sup> ): 147000
Latitude: 42°59'15" N	Relative depth: 1.4
Longitude: 70°56'07" W	Shore configuration: 2.22
Elevation (ft): 18	Areal water load (m/yr): 39.92
Shore length (m): 2100	Flushing rate (yr <sup>-1</sup> ): 19.30
Watershed area (ha): 466.2	P retention coeff.: 0.39
% watershed ponded: 0.0	Lake type: artificial

BIOLOGICAL:

26 February 2001

30 August 2000

DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 40%	ATTHEYA 80%
	#2	MELOSIRA 20%	DINOBRYON 5%
	#3	DINOBRYON 10%	FRAGILARIA 5%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			12.99
DOM. ZOOPLANKTON (% TOTAL)	#1	ROTIFER SPP. 48%	NAUPLIUS LARVA 37%
	#2	KERATELLA 30%	ARCELLA 12%
	#3		POLYARTHRA 11%
ROTIFERS/LITER		54	214
MICROCRUSTACEA/LITER		3	433
ZOOPLANKTON ABUNDANCE (#/L)		69	823
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			1.7
BOTTOM DISSOLVED OXYGEN (mg/L)		10.6	3.0
BACTERIA (E. coli, #/100 ml)	#1		< 10
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: EXETER RESERVOIR  
Town: EXETER

	26 February 2001		30 August 2000		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	7.0	6.8	7.3		7.2
A.N.C. (Alkalinity)	28.7	32.8	40.1		38.6
NITRATE NITROGEN	0.26	0.27	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.38	0.34	0.48		0.85
TOTAL PHOSPHORUS	<0.005	0.006	0.022		0.023
CONDUCTIVITY ( $\mu$ mhos/cm)	304.0	324.0	240.0		239.0
APPARENT COLOR (cpu)	34	37	55		65
MAGNESIUM			3.85		
CALCIUM			15.5		
SODIUM			21.6		
POTASSIUM			2.13		
CHLORIDE	72	65	45		45
SULFATE	13	13	8		7
TN : TP		102	22		37
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 2000**

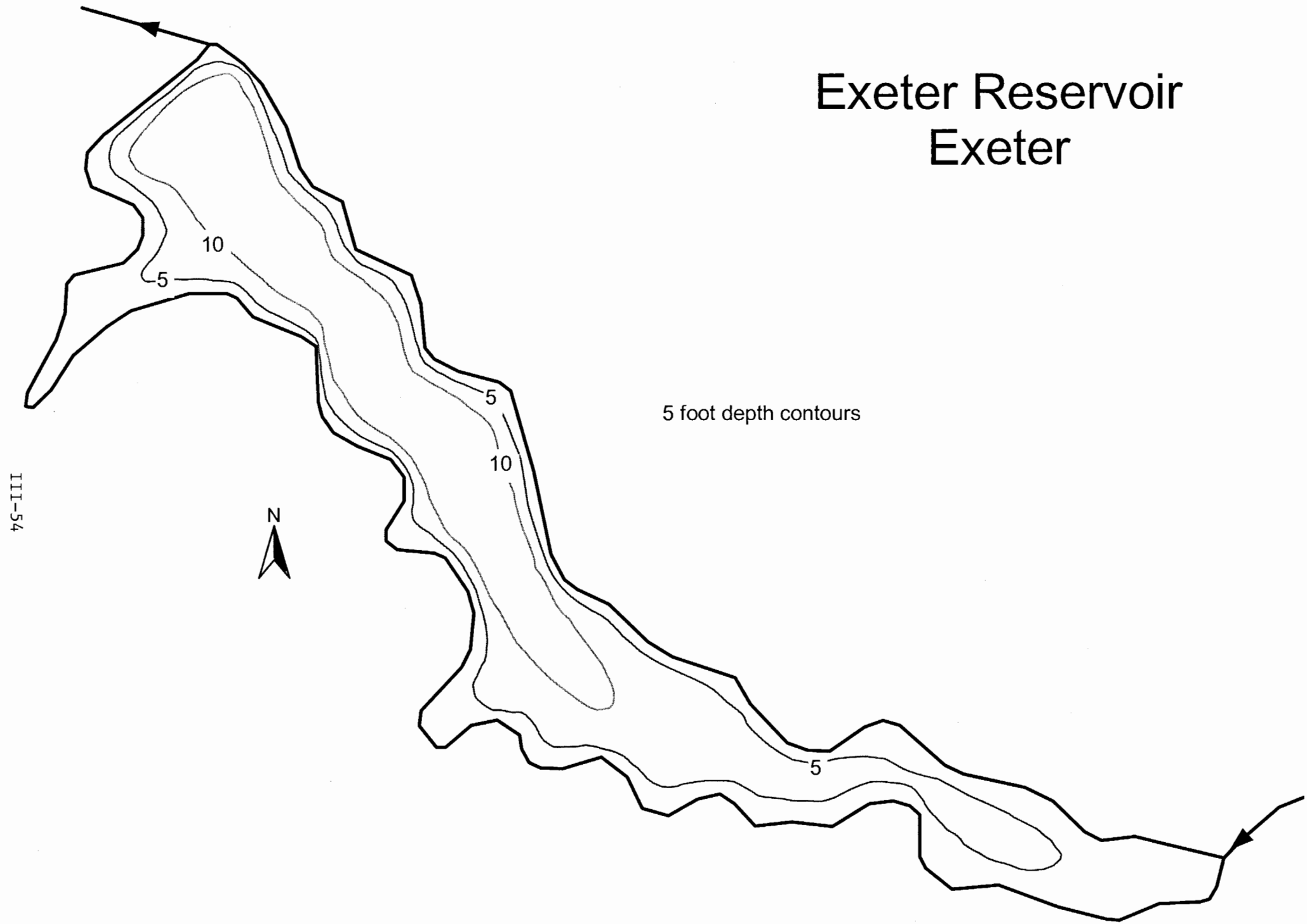
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	3	3	10	Eutro.

**COMMENTS:**

1. This is the public water supply for the Town of Exeter.
2. This is a tea-colored, circum-neutral, eutrophic pond with ANC values atypically high for NH ponds. Elevated conductivity and cation values suggest either road salt runoff or salt spray from the ocean.
3. The dominant summer net phytoplankton (*Attheya*) is very rare in NH ponds.
4. The shoreline was largely undeveloped but was very near large retail and residential developments.

# Exeter Reservoir

## Exeter



[illegible]

TOWN: EXETER  
WEATHER: sunny, light breeze, warm

[illegible]

```

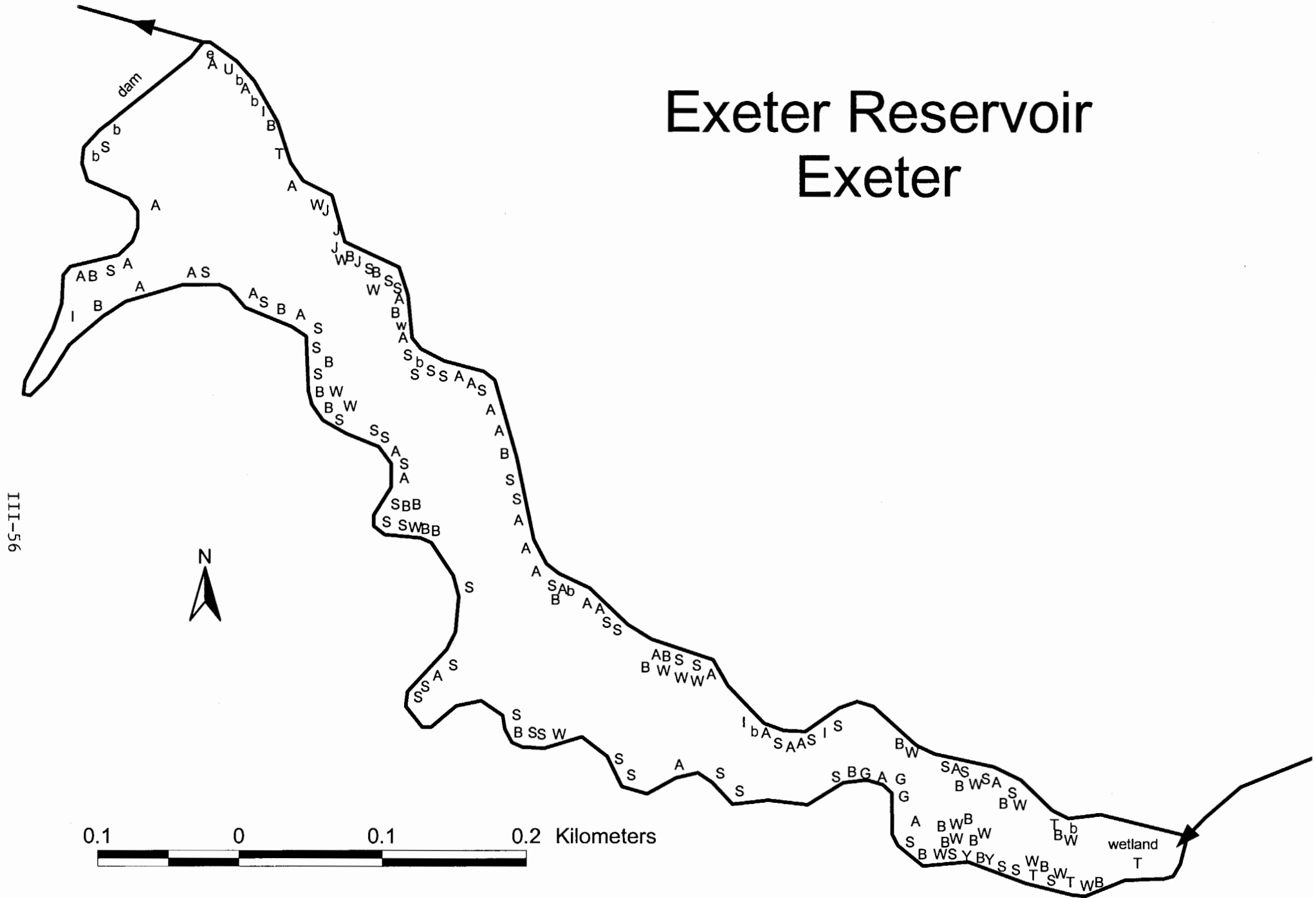
SECCHI DISK (m):    1.7           COMMENTS:
BOTTOM DEPTH (m):   4.4
TIME: 1110

```

\*Dissolved oxygen values are in mg/L

# Exeter Reservoir

## Exeter



[illegible]